

REMARKS

Claims 1-10 and 13-25 are pending in the subject application. Of these, Claims 24 and 25 have been withdrawn. In the claim amendments above, Claim 1 has been amended to more particularly point out and distinctly claim applicant's invention. Upon entry of this Amendment, Claim 1, as amended, Claims 2-10 and Claims 13-25 will be pending. Of these, Claims 1-10 and 13-23 will be under examination.

Rejection Under 35 U.S.C. 112, First Paragraph

In the July 21, 2009 Office Action, the Examiner rejected Claims 1-10 and 13-23 under 35 U.S.C. 112, first paragraph (written description). Specifically, the Examiner indicated that no support is found for the wing extending "vertically downward". In response, but without conceding the correctness of the Examiner's ground of rejection, applicant has amended Claim 1 so that it no longer recites "vertically downward". Accordingly, applicant maintains that the Examiner's ground of rejection under 35 U.S.C. 112, first paragraph, has been obviated and respectfully request that the Examiner reconsider and withdraw this ground of rejection.

Rejection Under 35 U.S.C. 103

In the July 21, 2009 Office Action, the Examiner rejected Claims 1-6, 10 and 13-17 under 35 U.S.C. 103(a) as obvious over Bergersen, U.S. Patent No. 4,784,605 (Bergersen), in view of Dutertre, WO 02/062253A1 ("Dutertre"). Claims 7-9 and 18-23 are also rejected under 35 U.S.C. 103(a) as obvious over Bergersen in view of Dutertre, and in further view of Bergersen, U.S. Patent No. 5,645,420 ("Bergersen II").

In response, applicant respectfully traverses the Examiner's grounds of rejection.

As the Examiner acknowledges, Bergersen does not teach each and every element of applicants' invention as recited in Claim 1. The Examiner states that "Bergersen fails to disclose a lower wing reaching the immediate proximity of the mouth cavity, extending lower than the corresponding outer wall, shape of lower arch, reducing at the point of the ligament of the tongue and outer wall on the upper jaw side surface partially continued upwards." Accordingly, the Examiner cites Dutertre as disclosing such a lower wing.

In support of this rejection, the Examiner refers to Dutertre's Figure 2 as teaching an appliance including a wing (30) capable of reaching the immediate proximity of the mouth cavity , extending lower than the corresponding outer wall, shape of lower arch, reducing at the point of the ligament of the tongue and outer wall on the upper jaw side surface partially continued upwards. The Examiner then stated that it would have been obvious for one skilled in the art to modify the appliance of Bergersen with the lower wing of Dutertre to provide full protection of teeth of a user and/or for positioning and holding an individual's teeth in a pre-determined position.

As pointed out in earlier responses filed in connection with the prosecution of this application, orthodontics is a very "precise science" and as far as occlusion guide appliances are concerned, even seemingly minor changes in their construction may have dramatic effects on their function. As the prior art includes a large number of different kinds of occlusion guide appliances, it would be far from reality to consider that a man skilled in this art would just simply go on combining features of prior art appliances without any teaching or suggestion that such a combination could be made. A professional in this field knows that if he changes a dimension of an appliance, even slightly, it may have dramatic or unforeseen effects on the function of the appliance. As a consequence, a man skilled in the art would not go into modifying dimensions of an existing appliance without a clear teaching or suggestion that such a re-design may be done or without first having taken an inventive step to realize and convince oneself that such a modification may be done and is of some use.

The inventors of the instantly claimed appliance have been well aware of Bergersen's and Dutertre's appliances. Bergersen's and Dutertre's patent publications were referred to even in the description of the priority application of the subject application. The design of the current appliance is based on intensive studies and clinical experience of two leading dentists in this field in Finland. In fact, Bergersen's commercial appliances formed basis for studies which have lead to a doctoral thesis on the subject, and the design of the current invention is based on certain flaws in Bergersen's designs which became apparent to the researchers during these studies.

Referring to the Office Action, Dutertre teaches no such reasons for wing 30 as indicated by the Examiner, nor does Figure 2 give any support for an argument that the downward dimension of the wing 30 would have been reduced at the point of the ligament of the tongue. Dutertre's Fig 2 is a perspective view of the device and if anything, it seems to be showing that the vertical dimension of the wing 30 is the same everywhere.

Further, it is clear that Dutertre's lower wing does not follow the anatomy of the mouth cavity as claimed herein, as it is curved "inwards". This is the opposite of applicant's claimed wing which extends outwardly.

One of the disclosed functions of the lower wing of the instant invention is to aid in the appliance better staying in an intended position in the mouth. This goal is achieved by the claimed feature according to which the lower wing essentially follows the shape of the lower-side-jaw-arch and, further, that such wing is arranged to reach the immediate proximity of the base of the mouth cavity. This construction also makes it next to impossible for a person to "push up and out" the appliance by his/her tongue. It is clear that the lower wing according to Dutertre, while being curved inwards to the extent that the wing will wrap the tongue (see page 6, last paragraph), does not follow the anatomy of the mouth cavity. Such a form of the wing is completely different to that of the claimed wing, and it appears that there will be such a gap between the base of the mouth cavity and the bottom of Dutertre's wing that one will be able to fit the tip of a tongue therein, thus making possible pushing the appliance off its place by one's tongue.

In addition, regarding the dimensions of the lower wing, Dutertre's Figure 2 discloses the horizontal dimension of the lower channel 4' as at the least the same, seemingly even more than, the dimension of the outer side wall corresponding thereto. This means, in practice, that the outer wall of the appliance barely extends over a molar crown, i.e. to approximately half-way of that part of the tooth which is visible above the gum. Comparing this vertical dimension to that of the lower wing 30, it is clear that the lower wing of Dutertre does not extend to the "immediate proximity of the base of the mouth cavity", but rather only just over the gum.

Accordingly, applicant maintains that the combination of Bergersen and Dutertre does not render the pending claims obvious as neither reference discloses a lower wing as claimed herein. In

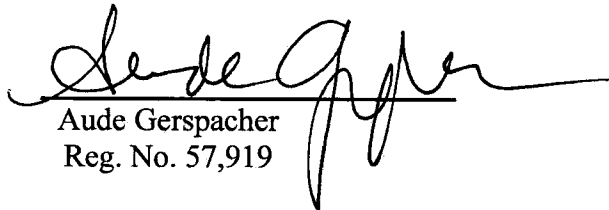
addition, Bergersen II does not cure this deficiency as it does not teach any lower wing at all. Applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection.

Should the claims herein be allowable but for a minor matter that could be the subject of either an Examiner's Amendment or a supplemental submission, applicant would appreciate the Examiner's contacting applicant's undersigned attorney.

Reconsideration and allowance of the claims as presently amended are respectfully requested.

Respectfully submitted,

November 3, 2009


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